

## 3.7 Potable Water

### **GOAL 701**

Monroe County shall support FKAA in the fulfillment of their statutory obligation and authority to provide for a safe, high quality and adequate supply, treatment, distribution, and conservation of potable water to meet the needs of present and future residents. [9J-5.011(2)(a)]

#### **Objective 701.1**

Monroe County shall ensure that at the time a development permit is issued, adequate potable water supply, treatment, and distribution facilities are available to support the development at the adopted level of service standards concurrent with the impacts of such development. [9J-5.011(2)(b)2]

#### **Policy 701.1.1**

Monroe County hereby adopts the following level of service standards to achieve Objective 701.1 and shall use these standards as the basis for determining facility capacity and the demand generated by a development. [9J-5.011(2)(c)2d]

#### **Level of Service Standards**

1. Quantity:

Residential LOS	66.50 gal./capita/day
Non-Residential LOS	0.35 gal./sq. ft./day
Overall LOS	100.00 gal./capita/day
Equivalent Residential Unit (2.24 average persons per household x 66.5 gallons/capita/day)	149.00 gallons per day
2. Minimum Pressure:  
20 PSI at customer service
3. Minimum Potable Water Quality:  
Shall be as defined by the U.S. Environmental Protection Agency. (Part 143-  
National Secondary Drinking Standards, 40 CFR 143, 44FR 42198)

#### **Policy 701.1.2**

Monroe County will encourage FKAA to pursue a goal of decreasing unaccounted for water to 13 percent or lower by replacing deficient transmission and distribution lines and implementing meter improvements by the year 2005. Obtaining this goal will result in the following projected potable water consumption: [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

Residential Consumption	57.00 gal./capita/day
Non-Residential Consumption	0.29 gallons/sq ft/day
Overall Consumption	86.00 gal./capita/day

**Policy 701.1.3**

By January 4, 1997, Monroe County shall adopt Land Development Regulations which provide a Concurrency Management System (see Capital Improvements Policy 1401.4.5). The Concurrency Management System shall ensure that no permits will be issued for new development unless adequate potable water supply, treatment, and distribution facilities needed to support the development at the adopted level of service standards are available concurrent with the impacts of development. [9J-5.011(2)(c)1]

**Policy 701.1.4**

The Concurrency Management System adopted in accordance with Policy 701.1.3 shall specify procedures for updating facility demand and capacity information, utilizing data provided by the FCAA as potable water facilities are installed or upgraded. [9J-5.011(2)(c)1]

**Policy 701.1.5**

Monroe County shall amend the potable water quantity level of service upon attainment of the goal level of service as indicated in Policy 701.1.2.

**Objective 701.2**

In coordination with Monroe County, the FCAA shall:

1. maintain a five year schedule of capital improvement needs for potable water supply, treatment and distribution, as identified through and in accordance with Policy 701.2.2;
2. identify responsible parties and agencies; and
3. identify time frames for completion.
4. The schedule will be updated annually consistent with Capital Improvements Policy 1401.1.2, and in accordance with the FCAA's annual budget process. [9J-5.011(2)(b)1 and 2]

**Policy 701.2.1**

The Florida Keys Aqueduct Authority (FCAA) shall continue to address the future needs of potable water supply, treatment and distribution facilities and evaluate options to satisfy these needs. FCAA and Monroe County shall evaluate and rank proposed capital improvement projects, on the basis of delivery cost and other factors, considered for inclusion in the five-year schedule of capital improvement needs in accordance with the criteria contained in Policy 701.2.2 as well as the Goals, Objectives, and Policies of the Comprehensive Plan. [9J-5.011(2)(c)1 and 2]

**Policy 701.2.2**

Proposed capital improvement projects shall be evaluated and ranked according to the following priority level guidelines: [9J-5.011(2)(c)1 and 2]

**Level One** - Whether the project is consistent with the FCAA's enabling legislation.

**Level Two** - Whether the project is needed to protect public health and safety, provide facilities and services, or to preserve or achieve full use of existing facilities.

**Level Three** - Whether the project increases efficiency of use of existing facilities, prevents or reduces future improvement costs, provides service to developed areas lacking full service, or promotes in-fill development.

**Level Four** - Whether the project represents a logical extension of facilities and services within a designated service area.

### **Objective 701.3**

Monroe County and the FKAA shall work cooperatively with the South Florida Water Management District (SFWMD), Dade County, and the Cities of Layton, Key Colony Beach and Key West to ensure the protection and availability of an adequate raw water supply at the Florida City Wellfield to meet the needs of Monroe County through the year 2010.

#### **Policy 701.3.1**

In coordination with Monroe County, the FKAA shall, as necessary, renew the Florida City Wellfield consumptive use permit issued by SFWMD. Alternative water sources such as reverse osmosis, cisterns and water re-use shall be evaluated and the most feasible solution implemented in the event that the necessary withdrawals from the Biscayne Aquifer are limited. [9J-5.011(2)(c)1; 9J-5.013(2)(c)4]

#### **Policy 701.3.2**

The Monroe County Growth Management Division shall provide technical assistance to the FKAA for the consumptive use permitting process. This technical assistance shall include providing information regarding future land use growth patterns, population trends, growth management policies and demand projections to ensure consistency between the FKAA permitting process and the Monroe County Comprehensive Plan. [9J-5.011(2)(c)1; 9J-5.013(2)(c)4]

#### **Policy 701.3.3**

The Monroe County Growth Management Division shall annually supply FKAA and SFWMD with the Concurrency Management Report prepared in accordance with Capital Improvements Policy 1401.4.9. These annual reports shall include the latest information on land use, population trends, and growth management policies as well as facility capacity analyses using data supplied by service providers. [9J-5.011(2)(c)1; 9J-5.013(2)(c)4]

#### **Policy 701.3.4**

Monroe County shall continue to reserve the right to review and comment on the SFWMD plans, such as water supply, cost, needs and sources, and water conservation plans, as they are developed.

#### **Policy 701.3.5**

Monroe County shall continue to coordinate with the Cities of Layton, Key Colony Beach and Key West and FKAA as necessary to facilitate systemwide compatibility on such

potable water-related issues as potable water levels of service, consumption projections, water conservation programs, and emergency management.

**Objective 701.4**

Monroe County shall work cooperatively with Dade County to encourage land use planning and development controls which shall protect the recharge area of the Florida City Wellfield from potential sources of groundwater contamination. [9J-5.011(2)(b)5; 9J-5.013(2)(b)2]

**Policy 701.4.1**

Protection of the Florida City Wellfield shall be accomplished through continued implementation of the Dade County Wellfield Protection Ordinance and the SFWMD Water Supply Policy Document. [9J-5.011(3)(c)1 and 4; 9J-5.013(2)(c)9]

**Policy 701.4.2**

By January 4, 1998, Monroe County shall seek an interlocal agreement with FKAA and Dade County. This agreement shall provide Monroe County with an opportunity to comment on land use and regulatory issues related to the Florida City Wellfield, aquifer and aquifer recharge area. It shall set forth procedures for review of land use and regulatory activities identified as having potentially significant impacts on the aquifer recharge and water supply systems especially concerning hazardous waste generation. Criteria for determination of significant impacts shall be included in the interlocal agreement. [9J-5.011(3)(c)1 and 4; 9J-5.013(2)(c)9]

**Objective 701.5**

FKAA shall supply adequate operating pressures in the transmission and distribution system to meet the adopted level of service standard specified in Policy 701.1.1(2) for the customer service connection. [9J-5.011(2)(b)1]

**Policy 701.5.1**

FKAA shall continue to maintain the transmission network and construct improvements to continue to provide a minimum operating pressure of 20 PSI at customer service. [9J-5.011(2)(c)2]

**Objective 701.6**

The FKAA shall continue to implement provisions to increase potable water storage through the Aquifer Storage Recovery System. [9J-5.011(2)(b)2]

**Policy 701.6.1**

By January 4, 1997, Monroe County shall, by resolution, support the development by FKAA of a total system storage capacity equal to 10 days of treated water flow at 50% of the annual average daily flow by the year 2005. [9J-5.011(2)(c)2d]

**Policy 701.6.2**

By January 4, 1997 Monroe County shall, by resolution, support the FKAA in their efforts to continue to develop an Aquifer Storage Recovery System, to aid in the provision of adequate storage capacity for emergency purposes. [9J-5.011(2)(c)1 and 2]

**Objective 701.7**

The FKAA shall continue to provide emergency service during electric power outages to the greatest extent feasible. [9J-5.011(2)(b)1]

**Policy 701.7.1**

In the event of a power outage, the emergency diesel pumps will deliver 15.6 MGD at 125 PSI during emergency conditions while the treatment plant will be operated by a 1,000 KVA diesel generator. [9J-5.011(2)(c)(2)d]

**Objective 701.8**

FKAA shall improve its capacity to provide for fire flows in the areas outlined in Policy 701.8.1 to ensure the protection of the public health, welfare and safety. [9J-5.011(2)(b)1]

**Policy 701.8.1**

By the year 2000, the FKAA, in accordance with its Capital Improvements Program, shall continue to upgrade the distribution system toward the goal of providing fire flow capabilities in the following areas:

Proposed Fire Flow Areas:

1. Key West and Stock Island (current fire flow areas)
2. Everywhere on US 1, except non-developable areas
3. Ocean Reef
4. Key Colony Beach
5. Layton
6. Marathon
7. Duck Key
8. Tavernier

Proposed Fire Flow Requirements by Land Use Zone:

- |    |   |           |
|----|---|-----------|
| 1. | Suburban Residential                                  | 750 GPM   |
| 2. | Mobile Home, Recreational Vehicle                     | 1,500 GPM |
| 3. | Urban Commercial, Suburban Commercial, and Commercial | 2,000 GPM |

All commercial facilities not along US 1 shall provide "on site" fire abatement, as currently required. In all other areas the FKAA aqueduct system shall not be considered even as a future primary fire abatement source. However, all line upgrades shall be designed and constructed so as to provide approximately 250 GPM to extreme locations. [9J-5.011(2)(c)1 and 2]

**Policy 701.8.2**

By January 4, 1997, the Monroe County Office of the Fire Marshall, in accordance with the FKAA, shall develop fire districts for subsequent implementation if feasible. [9J-5.011(2)(c)1]

**Policy 701.8.3**

Since fire flow improvements in the areas identified by Policies 701.8.1 and 701.8.2 will result in significant fire insurance premium reductions for affected areas, charges for fire flow improvements in these areas shall be charged to these areas only, as opposed to general system absorption of such charges. [9J-5.011(2)(c)1]

**Objective 701.9**

Monroe County shall continue to assist the FKAA with water conservation efforts and assist in implementing the FKAA's Water Conservation Plan consistent with SFWMD's Water Shortage Plan and Water Conservation Program. The County shall implement Policies 701.9.1 to further conserve potable water use. [9J-5.011(2)(b)4; 9J-5.013(2)(b)2]

**Policy 701.9.1**

By January 4, 1997, the Monroe County Growth Management Division, with input from the FKAA and SFWMD, and other affected organizations shall adopt Land Development Regulations, which implement a xeriscape landscape ordinance, a permanent irrigation ordinance, and plumbing fixture efficiency standards consistent with the mandatory elements of the FKAA Water Conservation Plan and the SFWMD Model Landscape Code for South Florida. Prior to the adoption of the xeriscape landscape ordinance, permanent irrigation ordinance and plumbing efficiency standards, drafts of these ordinances and standards will be submitted to the SFWMD for review and comment, and when applicable the recommendations will be incorporated in the water conservation measures. [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

**Policy 701.9.2**

During the development of updated Land Development Regulations in accordance with Policy 701.9.1, the Monroe County Growth Management Division and FKAA shall evaluate building codes, utility regulations, landscaping ordinances, and public education programs for implementation of water conservation measures. [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

**Policy 701.9.3**

In accordance with its Water Conservation Plan, the FKAA shall, with input from Monroe County, continue to implement a leak detection program and a conservation rate structure. Monroe County and the FKAA, with input from the SFWMD and other affected organizations, shall formulate and initiate implementation of a joint public education program for water conservation. [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

**Policy 701.9.4**

Monroe County and the FKAA shall continue to comply with SFWMD water use restrictions including all Phase I and Phase I (modified) water use restrictions when water shortages are declared by the SFWMD. [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

**Policy 701.9.5**

Monroe County shall coordinate with the Florida Health and Rehabilitative Services (HRS) to permit utilization of grey water storage systems and utilization for all exterior irrigation and flushing purposes. Upon receipt of authorization from HRS, policies shall be developed to implement the use of grey water storage systems where economically feasible. [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

**Policy 701.9.6**

Monroe County shall permit and encourage rainwater storage facilities for all household uses such as irrigation, car, patio, and boat washing, at a minimum. [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

**Policy 701.9.7**

By January 4, 1997, Monroe County shall adopt Land Development Regulations which establish a Permit Allocation and Point System for new residential and non-residential development (see Future Land Use Objectives 101.2, 101.3, and 101.5 and supporting policies). In developing the Point System, Monroe County shall consider assigning a positive point rating to developments utilizing alternative water collection systems such as cisterns, grey water reuse systems and wastewater treatment plant effluent reuse which conserve potable water supply. [9J-5.011(2)(c)3; 9J-5.013(2)(c)4]

**Policy 701.9.8**

As the water conservation measures set forth in Policies 701.9.1 through 701.9.7 are implemented, Monroe County shall re-evaluate the adopted potable water levels of service through the evaluation and appraisal report process as set forth in Chapter 163.3191 F.S.

**Objective 701.10**

In coordination with the FKAA, Monroe County shall continue to maximize the use of existing facilities and discourage urban sprawl through implementation of Potable Water Policies 701.10.1 through 701.10.5. [9J-5.011(2)(b)3]

**Policy 701.10.1**

By January 4, 1998, Monroe County shall evaluate existing FKAA policies related to identification and adoption of capital improvements. Improvements consistent with achieving Objective 701.10 shall be incorporated into Monroe County's annual Concurrency Management Report prepared in accordance with Capital Improvements Policy 1401.4.9. [9J-5.011(2)(c)1]

**Policy 701.10.2**

All FKAA facility expansions shall be consistent with the Future Land Use Map, the Goals, Objectives, and Policies of the Comprehensive Plan, and adopted levels of service. [9J-5.011(2)(c)1]

**Policy 701.10.3**

Monroe County shall review and comment on the FKAA Capital Improvements Plan for Comprehensive Plan consistency prior to inclusion in the annual Concurrency Management Report prepared in accordance with Capital Improvements Policy 1401.4.9. [9J-5.011(2)(c)1]

**Policy 701.10.4**

The FKAA, through its fee schedule, shall continue to assess charges for new units for meter fees, tapping fees, service charges and water main extension costs in order to promote maximizing the use of existing facilities and discouraging urban sprawl. [9J-5.011(2)(c)1]

**Policy 701.10.5**

The FKAA shall continue its policy of not providing for water connection services in National Wildlife Refuge areas or hardwood hammock areas within its jurisdiction as specified in FKAA's enabling legislation and the FKAA Policy and Procedure Handbook, Chapter 48-7. [9J-5.011(2)(c)1]



